Press release

2001: Second warmest year globally since records began

18 December 2001

The year 2001 is set to be the second warmest year in the past 142 years, according to figures released by the Met Office and the World Meteorological Organization in Geneva today.

Globally, the current trend of very warm years continues. Nine of the 10 warmest years have occurred since 1990, including 1999 and 2000; only 1998 was warmer than 2001. Average global temperatures have risen by more than 0.6 °C over the past 100 years, although the rise has not been continuous.

These global statistics are compiled using data from land and sea, which have been analysed by the Met Office and the University of East Anglia. The global mean temperature is likely to be about 0.42 °C above the 1961-1990 normal.

According to a forecasting technique developed at the Met Office's Hadley Centre for Climate Prediction and Research, the global surface temperature for 2002 is expected to be 0.47 °C above the 1961-1990 average, with a 95% confidence range of 0.33 °C to 0.61 °C. There is about a 75% probability that 2002 will be warmer than 2001, but only about a 10% likelihood that 2002 will be as warm or warmer than the warmest year, 1998, which was 0.57 °C above the average. The forecast of 0.47 °C for 2001, made in December 2000, successfully predicted appreciable global warming compared to 2000.

A number of temperature and rainfall records were broken across England and Wales during 2001. Notably, the year saw the warmest October on record with an average Central England Temperature of 13.3 °C, 2.7 °C above the 1961-1990 average. The autumn ranked with the recent warm autumns of 1995 and 1999, but was a little cooler than 1978, with an average Central England Temperature of 11.4 °C. There were no hard air frosts before mid-December when temperatures fell below the seasonal average.

The copious rains of 2000 continued into early 2001, making the 24-month period up to March 2001 the wettest in the England and Wales precipitation series that began in 1766. Although this October was wet, with flooding in Eastern England, so far November and December have been drier than average. Up to 15 December, this year's rainfall total, averaged across England and Wales, is 938 mm - nearly 10% above average. The total in Scotland so far is about 10% below average; Northern Ireland has had a very dry year, with a rainfall total of more than 20% below average, although not as dry as 1975.

David Parker, of the Hadley Centre, said: "This year's Central England Temperature is expected to be between 0.5 °C and 0.6 °C above the 1961-1990 average, but this is more than half a degree short of the warmest years: 1949, 1990 and 1999. There have been between 30 and 40 years warmer than 2001 in the 343-year history of the Central England Temperature."

Phil Jones of the Climatic Research Unit, University of East Anglia, said: "The year was warm globally, despite the remnants of the cold La Niña in the tropical Pacific. However, the 1998 global record is unlikely to be broken without a strong El Niño warming in the tropical Pacific."

More about climate monitoring

More about climate prediction

Notes:

1. With 13 days remaining in 2001, all figures contained in the news release are provisional. However, the global temperature ranking relative to other years is unlikely to change.

2. The accuracy of the experimental forecast for 2002 may depend on the development of a weak to moderate El Niño warming event in the tropical Pacific in 2002. At the time the forecast was issued, sea surface temperatures in the central and eastern tropical Pacific were generally close to average. El Niño is a warming of the eastern and central equatorial Pacific Ocean surface by several degrees. El Niño occurs irregularly, typically once every three to seven years, and can last for about a year. La Niña is its cooling counterpart.

3. The period over which averages have been calculated is 1961-90.

For further information:
Met Office Press Office +44 (0)1392 886655

Met Office Customer Centre 0870 900 0100
If you're outside the UK +44 (0)1392 885680

PRINTABLE VERSION

About
Met Office
Hadley Centre
Terms and conditions
Advertise on our site

News
News release archive
Media Centre

Learn
About the weather
From the bookshelf

Services

Mobile text forecasts
Weathercall
Marinecall
Mountain weather
MetWEB
Talk to a forecaster

Links
Met Office data users
National met. services
Scientific interest sites
EA Floodline
Directgov
Freedom of Information

Contact
Contact us
Questions answered

© Crown copyright